

WHAT IS CLAIMED IS:

1. A system for enforcing data stream continuity comprising:

5 a server coupled to a transmission link for providing a data stream to at least one client over the transmission link, the data stream being segmented into units, the server including:

a scrambler for encrypting at least one first unit using an encryption key;

10 a steganographic unit for embedding the encryption key into at least one second unit for the data stream such that steganographic information is needed by the client to determine the encryption key and decipher the data stream.

15 2. The system as recited in claim 1, wherein the steganographic unit employs a steganographic masking algorithm.

20 3. The system as recited in claim 1, wherein the data stream includes a transmission order which alternates between first units and second units.

4. The system as recited in claim 1, wherein the steganographic unit encrypts the at least one second unit.

5. The system as recited in claim 1, wherein the at least one first unit and the at least one second unit are encrypted and each carries a portion of the encryption key.

6. The system as recited in claim 1, wherein the transmission link includes the Internet.

7. The system as recited in claim 1, wherein at least one of the client and the server include a memory storage device.

8. A system for enforcing data stream continuity comprising:

a client system coupled to a transmission link for receiving a data stream from at least one server over the transmission link, the data stream being segmented into units, the client system including:

a key extractor for extracting an encryption key  
steganographically hidden in at least one first unit in the  
data stream received from the server such that  
steganographic information is needed by the client to  
5 determine the encryption key;

a descrambler for descrambling at least one second  
unit which was encrypted in accordance with the encryption  
key before transmission from the server; and

10 a decoder coupled to the key extractor and the  
descrambler for reassembling the data stream such that all  
of the units of the data stream are needed to decipher the  
data stream.

9. The system as recited in claim 8, wherein the data  
15 stream includes a transmission order which alternates  
between first units and second units.

10. The system as recited in claim 8, wherein the  
encryption key is also steganographically hidden in the at  
20 least one second unit.

11. The system as recited in claim 8, wherein the at least one first unit and the at least one second unit are encrypted and each carries a portion of the encryption key.

5 12. The system as recited in claim 8, wherein the transmission link includes the Internet.

10 13. The system as recited in claim 8, wherein at least one of the client and the server include a memory storage device.

14. A method for enforcing data stream continuity comprising the steps of:

providing data to be transmitted over a link;

15 segmenting the data into units for a data stream to be transferred over the link;

scrambling at least one first unit by encrypting the at least one first unit using an encryption key;

20 steganographically embedding the encryption key into at least one second unit for the data stream such that

steganographic information is needed by a client to  
determine the encryption key and decipher the data stream;  
extracting the encryption key steganographically  
embedded in the at least one second unit in the data stream;  
5        descrambling at least one first unit which was  
encrypted in accordance with the encryption key; and  
reassembling the data stream at the client such that  
all of the units of the data stream are needed to decipher  
the data stream.

10        15. The method as recited in claim 14, wherein the  
data stream includes a transmission order which alternates  
between first units and second units.

15        16. The method as recited in claim 14, wherein the  
step of steganographically embedding includes the step of  
steganographically embedding portions of the encryption key  
in the at least one first unit.

17. The method as recited in claim 14, wherein the at least one first unit and the at least one second unit are encrypted and each carries a portion of the encryption key.

5 18. The method as recited in claim 14, wherein the link includes the Internet.

10 19. The method as recited in claim 14, wherein at least one of the client and the server include a memory storage device.

20. A method for enforcing data stream continuity comprising the steps of:

providing data to be transmitted over a link;

15 segmenting the data into units for a data stream to be transferred over the link;

scrambling at least one first unit by encrypting the at least one first unit using an encryption key; and

20 steganographically embedding the encryption key into at least one second unit for the data stream such that

steganographic information is needed by a client to  
determine the encryption key and decipher the data stream.

21. The method as recited in claim 20, wherein the  
5 data stream includes a transmission order which alternates  
between first units and second units.

22. The method as recited in claim 20, wherein the  
step of steganographically embedding includes the step of  
10 steganographically embedding portions of the encryption key  
in the at least one first unit.

23. The method as recited in claim 20, wherein the at  
least one first unit and the at least one second unit are  
15 encrypted and each carries a portion of the encryption key.

24. The method as recited in claim 20, wherein the  
link includes the Internet.

25. The method as recited in claim 20, wherein at least one of the client and the server include a memory storage device.

5           26. A method for enforcing data stream continuity comprising the steps of:

          providing data segmented into units for a data stream transferred over the link, the units including at least one first unit and at least one second unit;

10           extracting an encryption key steganographically embedded in the at least one second unit in the data stream;

          descrambling the at least one first unit which was encrypted in accordance with the encryption key; and

15           reassembling the data stream at the client such that all of the units of the data stream are needed to decipher the data stream.

20           27. The method as recited in claim 26, wherein the data stream includes a transmission order which alternates between first units and second units.



28. The method as recited in claim 26, wherein the portions of the encryption key are embedded in the at least one first unit.

5           29. The method as recited in claim 26, wherein the at least one first unit and the at least one second unit are encrypted and each carries a portion of the encryption key.

10           30. The method as recited in claim 26 wherein the link includes the Internet.

15           31. The method as recited in claim 14, wherein at least one of the client and the server include a memory storage device.

          32. A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for enforcing data stream continuity, the method steps comprising:

20           segmenting data to be transmitted over a link into units for a data stream to be transferred over the link;

scrambling at least one first unit for the data stream  
before transmission by encrypting the at least one first  
unit using an encryption key; and

steganographically embedding the encryption key into at  
least one second unit for the data stream such that  
steganographic information is needed by a client to  
determine the encryption key and decipher the data stream;

extracting the encryption key steganographically  
embedded in the at least one second unit in the data stream;

descrambling at least one first unit which was  
encrypted in accordance with the encryption key; and

reassembling the data stream at the client such that  
all of the units of the data stream are needed to decipher  
the data stream.

33. A program storage device readable by machine,  
tangibly embodying a program of instructions executable by  
the machine to perform method steps for enforcing data  
stream continuity, the method steps comprising:

providing data to be transmitted over a link;

segmenting the data into units for a data stream to be transferred over the link;

scrambling at least one first unit by encrypting the at least one first unit using an encryption key; and

5       steganographically embedding the encryption key into at least one second unit for the data stream such that steganographic information is needed by a client to determine the encryption key and decipher the data stream.

10       34. A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for enforcing data stream continuity, the method steps comprising:

15       providing data segmented into units for a data stream transferred over the link, the units including at least one first unit and at least one second unit;

      extracting an encryption key steganographically embedded in the at least one second unit in the data stream;

20       descrambling the at least one first unit which was encrypted in accordance with the encryption key; and

